DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 11, 2010 has been entered.

This office action is responsive to the amendment filed on February 11, 2010. As directed by the amendment: claims 1-4, 7, 10-17, and 20-22 have been amended, claims 5-6, 8-9, and 18-19 have been cancelled and claim 23 has been added. Thus, claims 1-4, 7, 10-17, and 20-23 are presently pending in this application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 4, 7, 10-14, 17, & 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ditschun et al. (US 4,806,735) in view of Sciaky (US 3735089),

Normando (US 3627974), Forrest et al. (Pub No. US 2002/0148113 A1), and Trube et al. further in view of (US 6,469,277 B1).

4. Regarding claims 1, 4, 10, 12, 17, and 23, Ditschun et al. disclose a welding apparatus with a welding torch unit (See figure 1) connectable thereto via a hose pack; wherein at least one control device 52M (Fig. 6), wherein the welding torch unit (See figure 1) is formed by at least first 10 (fig. 1) and second 12 (fig. 1) separate welding torches (Col. 6, lines 30-42); wherein the first welding torch 10 (Fig.1) has a first welding wire 16 (fig. 1) and is configured to carry out a first cold-metal transfer welding process and the second welding torch 12 (Fig. 1) has a second welding wire 18 (fig. 1) and is configured to carry out a second cold-metal transfer welding process; wherein a device (Col. 6, lines 30-32) for synchronizing the first and second welding processes carried out by the first and second welding torches (Col. 3, lines 66 – Col. 4, lines 12) is provided.

With respect to claim 7, Ditschun et al. disclose wherein the first welding torch 10 (Fig.1) precedes the second welding torch 12 (Fig. 1) in a welding direction (Col. 2, lines 6-12).

With respect to claim 11, Ditschun et al. discloses wherein the first 10 (fig. 1) and second 12 (fig. 1) welding torches of the welding torch unit (See figure 1) are laterally offset relative to one another in the welding direction (Col. 2 lines 6-10).

With respect to claim 13, Ditschun et al. discloses wherein the first 16 (fig. 1) and second 18 (fig. 1) welding wires have different diameters (Col. 3, lines 3-7).

With respect to claim 14, Ditschun et al. discloses a welding method comprising the steps of carrying out a first welding process 24 (fig. 1); a second welding process 28 (fig. 1); and synchronizing the first and second welding processes in time (Col. 3, lines 66 – Col. 4, lines 12); wherein a consumable welding wire 16 (Fig.1) is moved forward and backward.

With respect to claim 20, Ditschun et al. discloses wherein the cold-metal transfer welding process follows the second welding process in a welding direction (Col. 2, lines 6-25).

With respect to claim 21, Ditschun et al. discloses wherein at least the first 24 (fig. 1) and second 28 (fig. 1) welding processes use consumable welding wires 16/18 (Fig. 1) and are temporally synchronized in a manner that the droplet detachments from the welding wires of the first 24 (fig. 1) and second 28 (fig. 1) welding processes take place simultaneously (Col. 3, lines 66 – Col. 4, lines 12).

With respect to claim 22, Ditschun et al. discloses wherein at least the first 24 (fig. 1) and second 28 (fig. 1) welding processes use consumable welding wires 16/18 (Fig. 1) and are temporally synchronized in a manner that the droplet detachments from the welding wires of the first 24 (fig. 1) and second 28 (fig. 1) welding processes take place simultaneously (Col. 3, lines 66 – Col. 4, lines 12).

Ditschun et al. discloses all the limitations of the claimed invention as set forth above, except for wherein only one current source supplies energy for conducting the first and second welding processes; wherein said current source is alternately connected with one of the first and second welding torches; a welding torch is

configured to carry out a cold-metal transfer welding process with a forward-backward movement of a welding wire; wherein the first and second welding wires comprises different materials; a plasma burner; wherein the first and second welding torches comprise a common gas nozzle; a plasma welding process; and a laser unit.

However, wherein only one current source supplies energy for conducting the first and second welding processes is known in the art. Sciaky, for example, teaches wherein only one current source supplies energy for conducting the first and second welding processes (col. 1, lines 3-8; lines 47-58). Sciaky further teaches such a configuration provides a multiple welds at one time upon a workpiece (col. 1, lines 24-26). It would have been obvious to one of ordinary skill in the art to modify Ditschun with wherein only one current source supplies energy for conducting the first and second welding processes of Sciaky in order to provide a multiple welds at one time upon a workpiece.

Wherein said current source is alternately connected with one of the first and second welding torches is known in the art. Normando, for example, teaches Wherein said current source is alternately connected with one of the first and second welding torches (col. 1, lines 74 – col. 2, lines 14; col. 2, lines 64 – col. 3, lines 3). Normando further teaches such a configuration provides when current is flowing in one arcing electrode circuit, no current flows in the adjacent electrode circuit, and vice versa (col. 5-8). It would have been obvious to one of ordinary skill in the art to modify Ditschun with Wherein said current source is alternately connected with one of the first and

second welding torches of Normando in order to provide when current is flowing in one arcing electrode circuit, no current flows in the adjacent electrode circuit, and vice versa.

A welding torch is configured to carry out a cold-metal transfer welding process with a forward-backward movement of a welding wire; and wherein the first and second welding wires comprises different materials are known in the art. Forrest, for example, teaches a welding torch is configured to carry out a cold-metal transfer welding process with a forward-backward movement of a welding wire (Abstract; Page 2, paragraph 34, lines 1-6); and wherein the first and second welding wires comprises different materials (Page 2, paragraph 31, lines 1-6). Forrest further teaches such a configuration provides a means to avoid movement of the substrate when a die is pressed against the substrate (para. 0031). It would have been obvious to one of ordinary skill in the art to modify Ditschun with the features set forth above of Forrest in order to avoid movement of the substrate when a die is pressed against the substrate.

A plasma burner; wherein the first and second welding torches comprise a common gas nozzle; a plasma welding process; and a laser unit are known in the art. Trube, for example, teaches a plasma burner (Col. 1, lines 48-53); wherein the first and second welding torches comprise a common gas nozzle (Col. 2, lines 55-58); a plasma welding process (Col.1, lines 48-53); and a laser unit (Abstract and one drawing). Trube further teaches such a configuration provides low input of energy into the material and high working speeds, resulting in a comparatively narrow area affected by heat and a great ratio of seam depth to seam width (col. 1, lines 29-33). It would have been obvious to one of ordinary skill in the art to modify Ditschun with the features set forth

above of Trube in order to provide low input of energy into the material and high working speeds, resulting in a comparatively narrow area affected by heat and a great ratio of seam depth to seam width.

5. Claims 2-3 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ditschun et al. (US 4,806,735) in view of Sciaky (US 3735089), Normando (US 3627974), Forrest et al. (Pub No. US 2002/0148113 A1), and Trube et al. further in view of (US 6,469,277 B1) as applied to claims 1, 4, 7, 10-14, 17, and 20-23 above, and further in view of Brunner et al. (US 6,570,132 B1).

Regarding claims 2-3 and 15-16, Ditschun in view of Sciaky, Normando, Forrest, and Trube disclose all the limitations of the claimed invention as set forth above, except for a WIG/MAG welding torch; a WIG welding torch; a MIG/MAG welding process; and a WIG welding process.

However, a WIG/MAG welding torch; a WIG welding torch; a MIG/MAG welding process; and a WIG welding process are known in the art. Brunner, for example, teaches a MAG welding torch (Col. 3, lines 16-18); a WIG welding torch (Col. 3, lines 16-18); a MIG/MAG welding process (Col. 3, lines 15-18); and a WIG welding process (Col. 3, lines 16-18). Brunner further teaches such a configuration provides a means to perform different varieties of welding torch and processes (Col. 3, lines 16-18). It would have been obvious to one of ordinary skill in the art to modify Ditschun in view of Sciaky, Normando, Forrest, and Trube with the features set forth above of Brunner in order to perform different varieties of welding torch and processes

Response to Amendment/Arguments

6. Applicant's amendments/arguments with respect to independents claims 1 and 14 have been considered but are moot in view of the new ground(s) of rejection.

As directed by the amendment: claims 1-4, 7, 10-17, and 20-22 have been amended, claims 5-6, 8-9, and 18-19 have been cancelled and claim 23 has been added. Thus, claims 1-4, 7, 10-17, and 20-23 are presently pending in this application.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KET D. DANG whose telephone number is (571) 270-7827. The examiner can normally be reached on Monday - Friday, 7:30 - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoang Tu can be reached on (571) 272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KET D DANG/
Examiner, Art Unit 3742
April 9, 2010
/TU B HOANG/

Supervisory Patent Examiner, Art Unit 3742